

Case Study Report



Project Identification

Customer: IDI - Ameriplex 2
Location: Plainfield, Indiana

Design Specifications

Facility Warehouse 461,592' x 46' High
Winter Operation 65° – 0°



Project Challenge:

To design a system that will heat the facility to 65° efficiently and meet all code requirements for new construction. Air Energy Systems proposed a combination system of Energy Rotation Rack Units with 80/20 Makeup Air Units to meet .06 cfm/sqft as an alternate bid to (4) Direct Fired Recirculation MAUs.

Equipment Solution:

Air Energy Systems provided a system (6) Energy Rotation Rack Units combined with (2) Rupp RAM 22 MAU. The Makeup Air Units will bring in required fresh air to meet code and will work with the Racks to heat during occupied hours. During the time IDI is operating in unoccupied hours, the MAU will shut off and the Racks will heat the space without any outside air.



Results of Rack System:

IDI experienced Annual Savings totaling **\$72,655**:

- Electrical – 349,455 kW at \$.10/kW
- Natural Gas – 47,136 therms at \$.80/therm

IDI saved \$.15/sf in operating costs

IDI received verified Electric and Gas Rebates:

- Citizens Gas – Natural Gas– **\$25,000**
- IPL – Electrical - **\$17,410**